

REMARKS

Claims 1-6, 11-14, 23-25 and 47-49 are pending. No new matter has been added by way of the present amendments. For instance, claims 15-22 and 46 have been cancelled. Also, claim 1 has been amended to include the subject matter of claims 20 and 22. Claims 3 and 5 have been amended to clarify the intended subject matter. Lastly, claim 47 has been amended to clarify that the detectable group is a Green Fluorescent Protein (GFP). Accordingly, no new matter has been added.

In view of the following remarks, Applicant respectfully requests that the Examiner withdraw all rejections and allow the currently pending claims.

Election/Restriction

Applicant notes that the Examiner has withdrawn claim 12 from consideration and stated that it is drawn to a non-elected species. However, Applicant submits that claim 12 is generic and therefore should be rejoined and considered.

Objections to the Specification

The Examiner has objected to the specification for the reasons outlined on page 3 of the Office Action. Applicant traverses. The Examiner asserts that the specification refers to a drawing, Figure 1E, however, there is no Figure 1E. Applicant submits that a replacement Figure 1E has been provided herewith.

Reconsideration and withdrawal of this objection are respectfully requested.

Information Disclosure Statement

Applicant submitted an Information Disclosure Statement on May 8, 2003, with 5 pages of Form PTO-1449 attached thereto. However, the Examiner has only returned initialed the first, third, and fourth pages of these Form PTO-1449s. The Examiner is therefore requested to return an initialed version of the second (2 of 5) and fifth (5 of 5) pages of the Form PTO-1449s indicating that the cited references have been considered.

Issues Under 35 U.S.C. § 112, First Paragraph

The Examiner has rejected claims 3, 4, 47 and 48 under 35 U.S.C. § 112, first paragraph, for the reasons recited at pages 3-4 of the outstanding Office Action. Applicant respectfully traverses this rejection.

First, the Examiner asserts that the specification does not provide a description by which the first heterologous conjugate is separately expressed from the second heterologous conjugate. Applicant disagrees. Claims 3 and 5 claim a method wherein the first heterologous conjugate and the second heterologous conjugate are encoded by nucleic acids. It is inherent that in a host cell system, these will be expressed separately since they are distinct conjugates. Applicant has amended claims 3 and 5 in

an attempt to clarify the claim language. One of ordinary skill in the art would fully understand that Applicant was in possession of the subject matter claimed at the time of filing the application.

Second, the Examiner asserts that the specification does not support a detectable group that was derived from GFP as recited in claim 47. Applicant traverses and submits that claim 47 has been amended to recite that the detectable group is a GFP. Several forms of GFP are known and those of skill in the art would understand that Applicant was in possession of these GFPs as detectable groups.

Third, the Examiner asserts that the step in claim 48 is not described in the as-filed specification. Applicant disagrees. Claim 48 requires that the localization occurs when the first protein of interest binds directly to said second protein of interest. At page 10, lines 5-6 of the specification, it is explained that all binding events in the invention can be either direct or indirect. Since the binding of said first and second proteins of interest is a binding event, Applicants submit that this subject matter is fully supported by the specification.

Based upon the above, reconsideration and withdrawal of these rejections are requested.

The Examiner has also rejected claims 1-6, 11, 13-25 and 46-49 under 35 U.S.C. § 112, first paragraph for the reasons recited at pages 4-5 of the outstanding Office Action. Applicant

traverses.

The Examiner asserts that the specification, while being enabling for GFP as the detectable group and isoforms of CaMKII α and β , does not provide enablement for the other claimed subject matter. Applicant disagrees.

Applicant has amended claim 1 to recite the subject matter of claims 20 and 22, relating to the nature of the internal structure. At the Interview dated October 29, 2003, the Examiner indicated that incorporating claims 20 and 22 into the independent claim would place application into condition for allowance. Since Applicant has complied with this suggestion, it is submitted that this rejection is moot. Reconsideration and withdrawal thereof are requested.

Issues Under 35 U.S.C. § 112, Second Paragraph

The Examiner has rejected claims 1-6, 11, 13-25 and 46-49 under 35 U.S.C. § 112, second paragraph, for the reasons recited at pages 5-7 of the outstanding Office Action. Applicant respectfully traverses these rejections.

First, the Examiner has rejected the claims for reciting "first" and "second" as relative terms. Applicant traverses and submits that these claim terms are fully definite and are used to distinguish the "first" and "second" heterologous conjugates and proteins of interest. These are commonly used terms in the art.

Second, the Examiner asserts that the "protein of interest"

is ambiguous and since Applicant has allegedly not responded, they have allegedly acquiesced. Applicant takes issue with this statement. In the previous response Applicant clarified the language of the claims, taking this issue into consideration. The nature of this claim language has remained substantially unchanged in the present submission. The protein of interest is fully described in the specification, for instance, the Examiner is referred to page 2, lines 29-30. Thus, the metes and bounds of this language are fully known.

Third, the Examiner has rejected claims 3 and 5 stating that it is confusing as to whether each of the heterologous conjugates are expressed separately by the cells. Applicant has amended claims 3 and 5 to recite that the heterologous conjugates are encoded by nucleic acids. The claims require that these conjugates remain separate until possible interaction, however, there is no requirement that the conjugates be expressed together. For instance, separate expression vectors, or even the same expression vector, depending upon the circumstances, could express the conjugates. Alternatively, the conjugates could be provided to the cell without actual expression within the cell. Accordingly, although several alternatives exist, Applicant submit that there is no indefiniteness in these claims.

Fourth, the Examiner asserts with respect to claim 6 that it is not clear as to the need for a method of interacting two known proteins. Applicants disagree. For instance, once two proteins

are identified, the method could still be performed for control or replication purposes.

Fifth, the Examiner still asserts that claims 24 and 25 are indefinite. The purpose behind claims 24 and 25 is to reflect that the first and second proteins may either have the same structure (but still being separate within the method) or they may have the same structure (and still be separate within the method). The Examiner's attention is again directed to the present specification at page 1, lines 13-15. The term "same" refers to the situation where the two proteins form a timer or oligomer. The language "different" refers to situations where the two proteins are, in fact, distinct proteins.

Sixth, the Examiner asserts that it is unclear as to how the detectable group is "derived from" GFP in claim 47. Applicant traverses and submits that claim 47 has been amended to reflect that the detectable group is a GFP molecule.

Seventh and lastly, the Examiner asserts that claim 48 does not add further limitation to the base claim. Applicant disagrees. Claim 1 requires binding, however, claim 48 requires that the binding be "direct", thus, in claim 1, other types of binding, for instance, indirect binding, are encompassed. Thus, claim 48 is more narrow than claim 1 from which it depends.

In view of the above, Applicant respectfully submits that the present claims fully satisfy the requirements of 35 U.S.C. § 112, second paragraph. Reconsideration and withdrawal of these

rejections is therefore requested.

Issues Under 35 U.S.C. § 102(b)

The Examiner has rejected claims 1-6, 11, 13-25 and 46-48 under 35 U.S.C. § 102(b) as being anticipated by Knippschild et al, Oncogene, 1997 (hereinafter referred to as Knippschild. The Examiner has also rejected claims 1-6, 11, 13-25 and 46-48 under 35 U.S.C. § 102(b) as being anticipated by Benfenati or Chen or Llinas. Applicant respectfully traverses each of these rejections.

The above-cited references fail to disclose the currently claimed subject matter. At the Interview dated October 29, 2003, the Examiner indicated that incorporating claims 20 and 22 into the independent claim would place application into condition for allowance. Applicant has amended claim 1 to include the subject matter of claims 20 and 22. Accordingly, these rejections are moot. Reconsideration and withdrawal thereof are requested.

Issues under 35 U.S.C. § 103(a)

The Examiner has rejected claims 1-6, 11, 13-25 and 46-49 under 35 U.S.C. § 103(a) as being obvious over Knippschild in view of Shirai. Applicant traverses.

At the Interview dated October 29, 2003, the Examiner indicated that incorporating claims 20 and 22 into the independent claim would place application into condition for allowance. Applicant has amended claim 1 to include the subject matter of

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claims 20 and 22. Accordingly, this rejection is moot. Reconsideration and withdrawal thereof are requested.

In view of the above, Applicant respectfully submits that the present claims define subject matter which fully satisfies the requirements of 35 U.S.C. § 112, first paragraph, and which is distinct from the cited art. Accordingly, the Examiner is respectfully requested to withdraw all rejections and allow the currently pending claims.

If the Examiner has any questions or comments, please contact Craig M. McRobbie, Reg. No. 42,874 at the offices of Birch, Stewart, Kolasch & Birch, LLP at (703) 205-8000 in the Washington, D.C. area.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), the Applicants hereby petition for an extension of one (1) month to November 16, 2003 in which to file a reply to the Office Action. The required fee of \$55.00 is enclosed herewith.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees

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required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17;
particularly, extension of time fees.

Respectfully submitted,

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